

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A device for controlling a characteristic of an image signal superimposed on a specimen image, comprising:
 - a main optical system configured to refract light emitted from a specimen into a main beam path;
 - a superimposition apparatus in a fixed relationship to the main optical system, configured to generate the image signal;
 - a superimposing reflector configured to reflect the image signal generated by the superimposition apparatus into the main beam path and to superimpose the image signal onto the specimen image;
 - an image measurement unit in a fixed relationship to the main optical system, configured to measure ~~a~~ ~~an overall~~ brightness of the specimen image; and
 - a controller configured to adjust ~~an overall~~ brightness of a plurality of regions of the image signal generated by the superimposition apparatus in response to ~~a measurement measurements~~ by the image measurement unit of the ~~overall~~ brightness of corresponding regions of the specimen image, wherein the controller decreases the brightness of the plurality of regions when the brightness of the corresponding regions is measured to be dull.
2. (Canceled)
3. (Previously Presented) The device as in claim 1, wherein the image measurement unit is configured to measure a spatial brightness distribution of the specimen image.
4. (Previously Presented) The device as in claim 1, wherein the image measurement unit is further configured to measure one selected from the group of color and

, contrast and the controller is further configured to adjust the selected one of color and contrast.

5. (Original) The device as in claim 4, wherein the image measurement unit is configured to measure a spatial color or contrast distribution of the specimen image.

6. (Original) The device as in claim 1, wherein the superimposition apparatus is one of a display and monitor.

7. (Previously Presented) The device as in claim 1, wherein the image measurement unit is configured to measure the brightness of the specimen image by directly measuring light emitted from the specimen and not refracted by the main optical system.

8. (Previously Presented) The device as in claim 1, wherein the image measurement unit is configured to measure the brightness of the specimen image by measuring light emitted from the specimen and refracted by the main optical system into the main beam path.

9. (Original) The device as in claim 8, further comprising a beam splitter configured to reflect a portion of the specimen image from the main beam path to the image measurement unit.

10. (Canceled)

11. (Previously Presented) The device as in claim 33, wherein the image measurement unit is configured to measure brightness of individual regions of the specimen image.

12. (Original) The device as in claim 11, wherein the individual regions are individual pixels.

13. (Previously Presented) The device as in claim 11, wherein the image measurement unit is configured to measure brightness of those individual regions that are in a viewer's line of sight.

14. (Canceled)

15. (Previously Presented) The device as in claim 33, wherein the controller is configured to adjust brightness of individual regions of the image signal generated by the superimposition apparatus in response to the measurement by the image measurement unit.

16. (Original) The device as in claim 15, wherein the individual regions are individual pixels.

17. (Previously Presented) The device as in claim 16, wherein the controller is configured to adjust brightness of individual pixels of the image signal generated by the superimposition apparatus in response to measurements by the image measurement unit of the brightness of the corresponding pixels of the specimen image.

18. (Previously Presented) The device as in claim 15, wherein the controller is configured to adjust brightness of individual regions of the image signal generated by the superimposition apparatus in response to measurements by the image measurement unit of the brightness of the corresponding regions of the specimen image.

19. (Currently Amended) The device as in claim 1, further comprising a manual input unit for providing a manual input signal from a viewer to the controller, wherein the controller is configured to adjust the ~~overall~~ brightness of the image signal generated by the superimposition apparatus in response to the manual input signal and the measurement by the image measurement unit.

20. (Original) The device as in claim 19, wherein the manual input unit is operable remotely from the device.

21. (Original) The device as in claim 1, wherein the image measurement device is one of a video camera and a CCD.

22. (Currently Amended) A method for controlling a brightness of an image signal superimposed on a specimen image, comprising:
providing a specimen;
producing a specimen image for viewing by a viewer;
measuring ~~an overall~~ brightness of the specimen image;
generating a control signal based at least in part on the ~~overall~~ brightness of the specimen image;
producing an image signal having a plurality of regions of ~~an overall~~ brightness that is ~~are~~ controlled by the control signal ~~such that the brightness of the plurality of regions is decreased when the brightness of corresponding regions of the specimen image is measured to be dull~~; and
superimposing the image signal on the specimen image for viewing by the viewer.

23. (Previously Presented) The method as in claim 22, further comprising measuring one of color and contrast of the specimen image and producing an image signal having one of color and contrast that is controlled by the control signal.

24. (Currently Amended) The method as in claim 22, wherein measuring ~~an overall~~ a brightness of the specimen image comprises reflecting a portion of the specimen image via a beam splitter toward an image measurement unit.

25. (Previously Presented) The method as in claim 34, wherein producing an image signal comprises producing an image signal having individual regions, wherein brightness of the individual regions are separately controlled by the control signal.

26. (Original) The method as in claim 25, wherein the individual regions are individual pixels.

27. (Currently Amended) A device for controlling a characteristic of an image signal superimposed on a specimen image, comprising:

a microscope configured to produce a specimen image;

a superimposition apparatus in a fixed relationship to the microscope, configured to generate the image signal; and

an image measurement unit in a fixed relationship to the microscope, configured to measure an ~~overall~~ brightness of the specimen image,

wherein ~~an overall~~ brightness of a plurality of regions of the image signal generated by the superimposition apparatus is automatically adjusted in response to ~~a measurement~~ measurements by the image measurement unit of the ~~overall~~ brightness of corresponding regions of the specimen image, wherein the controller decreases the brightness of the plurality of regions when the brightness of the corresponding regions is measured to be dull.

28. (Original) The device as in claim 27, wherein the microscope is a surgical stereomicroscope.

29. (Canceled)

30. (Previously Presented) The device as in claim 27, wherein the image measurement unit is further configured to measure one selected from the group of color and contrast and the superimposition apparatus is further configured to adjust the selected one of color and contrast.

31. (Previously Presented) The device as in claim 35, wherein brightness of individual regions of the image signal generated by the superimposition apparatus are individually adjusted in response to measurements by the image measurement unit of brightness of corresponding regions of the specimen image.

32. (Original) The device as in claim 31, wherein the individual regions of the image signal and the corresponding regions of the specimen image are pixels.

33. (Currently Amended) A device for controlling a characteristic of an image signal superimposed on a specimen image, comprising:

a main optical system configured to refract light emitted from a specimen into a main beam path;

a superimposition apparatus in a relationship to the main optical system, configured to generate the image signal;

a superimposing reflector configured to reflect the image signal generated by the superimposition apparatus into the main beam path and to superimpose the image signal onto the specimen image;

an image measurement unit in a relationship to the main optical system, configured to measure a brightness of the specimen image; and

a controller configured to adjust ~~a brightness~~ brightnesses of a plurality of regions of the image signal generated by the superimposition apparatus in response to ~~a measurement~~ measurements by the image measurement unit of ~~the brightness~~ brightnesses of corresponding regions of the specimen image, so as to maintain a substantially constant ~~ratio~~ ratios of each of the ~~brightness~~ brightnesses of the plurality of regions of the image signal to each of the ~~brightness~~ brightnesses of the corresponding regions of the specimen image ~~and so that said image signal is substantially brighter than said specimen image.~~

34. (Currently Amended) A method for controlling a brightness of an image signal superimposed on a specimen image, comprising:

providing a specimen;

producing a specimen image for viewing by a viewer;

measuring a brightness of the specimen image;

generating a control signal based at least in part on the brightness of the specimen image;

producing an image signal having a plurality of regions, wherein a brightness brightnesses of the plurality of regions are ~~that is~~ controlled by the control signal; and

superimposing the image signal on the specimen image for viewing by the viewer,

wherein the control signal is generated so as to maintain ~~a~~-substantially constant ~~ratio~~ **ratios** of each of the **brightnesses** of the plurality of regions of the image signal to each of the ~~brightness~~ **brightnesses** of corresponding regions of the specimen image, ~~and so that said image signal is substantially brighter than said specimen image.~~

35. (Previously Presented) A device for controlling a characteristic of an image signal superimposed on a specimen image, comprising:

a microscope configured to produce a specimen image;

a superimposition apparatus in a relationship to the microscope, configured to generate the image signal; and

an image measurement unit in a relationship to the microscope, configured to measure a brightness of the specimen image,

wherein ~~a brightness~~ **brightnesses** of a plurality of regions of the image signal generated by the superimposition apparatus ~~are~~ **is**-automatically adjusted in response to ~~a measurement~~ **measurements** by the image measurement unit of ~~the brightness~~ **brightnesses** of corresponding regions of the specimen image, so as to maintain ~~a~~ substantially constant ~~ratio~~ **ratios** of each of the **brightness** **brightnesses** of the plurality of regions of the image signal to each of the **brightness** **brightnesses** of the corresponding regions of the specimen image, ~~and so that said image signal is substantially brighter than said specimen image.~~

36. (Currently Amended) The device as in claim 1, wherein said controller is configured to automatically adjust the ~~overall~~ brightness of the image signal.

37. (Previously Presented) The device as in claim 22, comprising automatically producing the image signal having a brightness that is controlled by the control signal.

38. (Previously Presented) The device as in claim 1, further comprising a microscope comprising said main optical system.

39. (Previously Presented) The device as in claim 33, further comprising a microscope comprising said main optical system.

40. (New) The device as in claim 1, wherein the controller increases the brightness of the plurality of regions when the brightness of the corresponding regions is measured to be bright.

41. (New) The device as in claim 27, wherein the controller automatically increases the brightness of the plurality of regions when the brightness of the corresponding regions is measured to be bright.

42. (New) The method as in claim 22, wherein the brightness of the plurality of regions is increased when the brightness of the corresponding regions is measured to be bright.

43. (New) The device as in claim 17, wherein the controller is configured to decrease the brightness of individual pixels of the image signal generated by the superimposition apparatus in response to measurements by the image measurement unit of the brightness of the corresponding pixels of the specimen image to be dull.

44. (New) The device as in claim 43, wherein the controller is configured to increase the brightness of individual pixels of the image signal generated by the superimposition apparatus in response to measurements by the image measurement unit of the brightness of the corresponding pixels of the specimen image to be bright.

45. (New) The device as in claim 33, wherein the controller is configured to adjust brightness of substantially all individual pixels of the image signal generated by the superimposition apparatus in response to measurements by the image measurement unit of the brightness of the corresponding pixels of the specimen image such that the ratio of the adjusted brightness of substantially all individual pixels to the measured brightness of the corresponding pixels are substantially all the same.